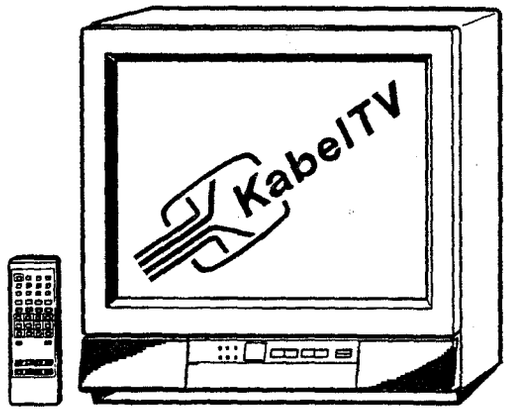
Service Manual

COLOR TELEVISION RECEIVER

PAL/SECAM

ORION

COLOR 556



Chassis Code:

A

Bestell-Nr.:

4671

SPECIFICATIONS

PICTURE SIZE	21 inch
SYSTEM	PAL/SECAM
FREQUENCY RANGE: VHF(L)	2 - 4, X - S2 ch
VHF(H)	S3 - S10, 5 - 12, S11 - S20 ch
UHF	21 - 69 ch
MAXIMUM SENSITIVITY: VHF	20 dB
UHF	25 dB
INTERMEDIATE FREQUENCY:	
Picture IF Carrier Frequency	38.9 MHz
Color Sub Carrier Frequency	34.47 MHz
Sound IF Carrier Frequency	33.4 MHz
SOUND INTERMEDIATE FREQUENCY	5.5 MHz
MAXIMUM OUTPUT POWER	5.0 W
10% THD OUTPUT POWER	4.0 W
SPEAKER	4 ohm
POWER SOURCE	AC 220V

IMPORTANT

*USE AN ISOLATION TRANSFORMER WHEN PERFORMING ANY SERVICE ON THIS CHASSIS.

*WHEN REMOVING A PCB OR RELATED COMPONENT, AFTER UNFASTENING OR CHANGING WIRE, BE SURE TO PUT WIRE BACK IN ITS ORIGINAL POSITION.

*INFERIOR SILICON GREASE CAN DAMAGE IC's AND TRANSISTORS. WHEN REPLACING AN IC's OR TRANSISTORS, USE ONLY SPECIFIED SILICON GREASE (YG626OM). REMOVE ALL OLD SILICON BEFORE APPLYING NEW SILICON.

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ELECTRICAL ADJUSTMENTS

2-3: SECAM IDENT

1. Receive the SECAM Color Bar Pattern.
2. Set the PAL/SECAM switch to SECAM position.
3. Set the AFT switch ON position.
4. Connect a digital voltmeter to TP603.
5. Adjust **L606** until voltage will be maximum. (More than 9V)

2-4: SECAM PHASE

1. Receive the SECAM Color Bar Pattern.
2. Set the PAL/SECAM switch to SECAM position.
3. Adjust **L601** and **L602** until white part of the pattern is not changed even though you turn Color control from minimum to maximum.

2-5: RF AGC

NOTE
Adjust after adjusting 2-1.

2-5-A: Weak electric field case.

1. Receive the noisy channel.
2. Adjust **VR201** until noise will be weak.
3. Change the channel, confirm other channels are normal.

2-5-B: Strong electric field case.

(When diagonal streaks, radio frequency interference appear.)

1. Adjust **VR201** until diagonal streaks will be weak.
2. When it is not good condition after adjusting VR201, install the attenuator to the antenna terminals, then adjust step (1) again.
3. Confirm noise will appear.
4. Change the channel, confirm other channels are normal.

2-6: CUT OFF AND WHITE BALANCE

1. Receive the White 100% Pattern from Color Bar Generator.
2. Set the Cut off controls red (**VR801**) and blue (**VR804**) to minimum position.
3. Set the Drive controls red (**VR802**) and blue (**VR805**) to center position.
4. Set the Service switch to the service position.
5. Connect the oscilloscope to TP801.
6. Adjust the Bright and Contrast controls until the Cut off voltage will be DC150V.
7. Adjust the Screen control until horizontal line will light slightly.
8. Set the Service switch to normal position.
9. Adjust the Drive controls red (**VR802**) and blue (**VR805**) until the screen will be white.
10. Set the Bright and Contrast controls to minimum position.
11. Adjust the Cut off controls red (**VR801**) and blue (**VR804**) until the screen will be white.

2-7: FOCUS

1. Receive the broadcasting signal.
2. Adjust the Focus control until picture will be distinct.

2-8: VERTICAL SIZE

1. Receive the Crosshatch Pattern from the Color Bar Generator.
2. Adjust the Bright and Contrast controls until the crosshatch pattern is distinct.
3. Adjust **VR401** until the center of crosshatch is square.
4. Receive broadcasting signal, then confirm picture is normal

2-9: HORIZONTAL POSITION

1. Receive the Color Bar Pattern.
2. Set the Bright and Contrast controls to center position.
3. Adjust **VR402** until the color width of both of screen edges will be equal.
4. Receive broadcasting signal, then confirm picture is normal

2-10: HUE DELAY

1. Receive the DEM Pattern.
2. Connect the dual oscilloscope to TP601 and TP602.
3. Adjust **L603** and **VR601** until the waveform will be straight line. **(Refer to Fig. 2-3)**

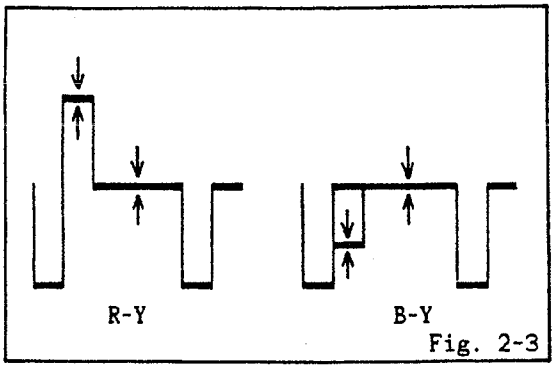


Fig. 2-3

2-11: SUB BRIGHT

1. Receive the Monochrome Pattern.
2. Press the NORMAL button on the remote control unit.
3. Adjust **VR603** until 0% of gray scale will be black.

2-12: SUB COLOR

1. Receive the Color Bar Pattern.
2. Press the NORMAL button on the remote control unit.
3. Connect the oscilloscope to TP801.
4. Adjust **VR602** until red color level will be 75%.

2-13: T'TEXT FREQUENCY

1. Receive the noise signal.
2. Connect the frequency counter to TP3.
3. Adjust **TC851** until the counter will be 6.001MHz.

2-14: SOUND IF DETECTION

2-14-A: For 5.5MHz

1. Receive the Mult-channel TV sound broadcasting signal.
2. Connect the distortion meter to TP703.
3. Adjust **L704** until the distortion rate will be minimum.

2-14-B: For 5.74MHz

1. Receive the Mult-channel TV sound broadcasting signal.
2. Connect the distortion meter to TP704.
3. Adjust **L702** until the distortion rate will be minimum.

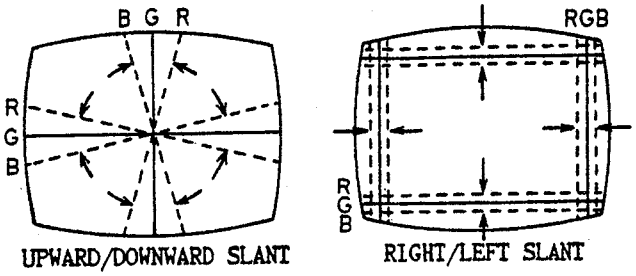
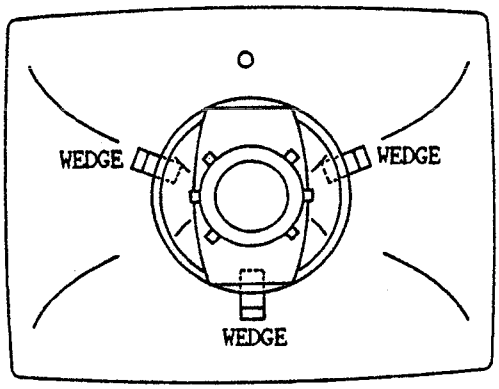


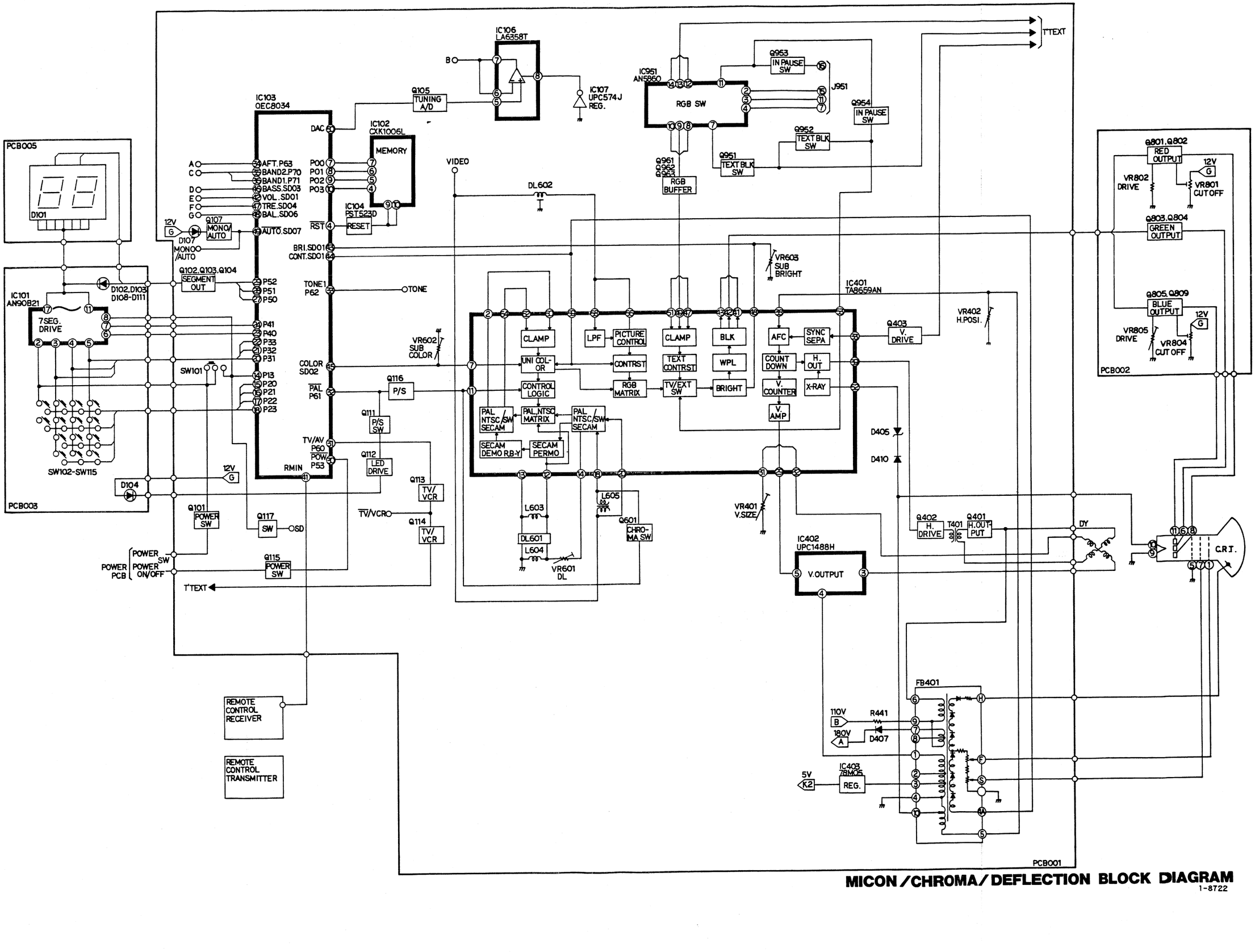
Fig. 3-2-a



WEDGE POSITION

Fig. 3-2-b

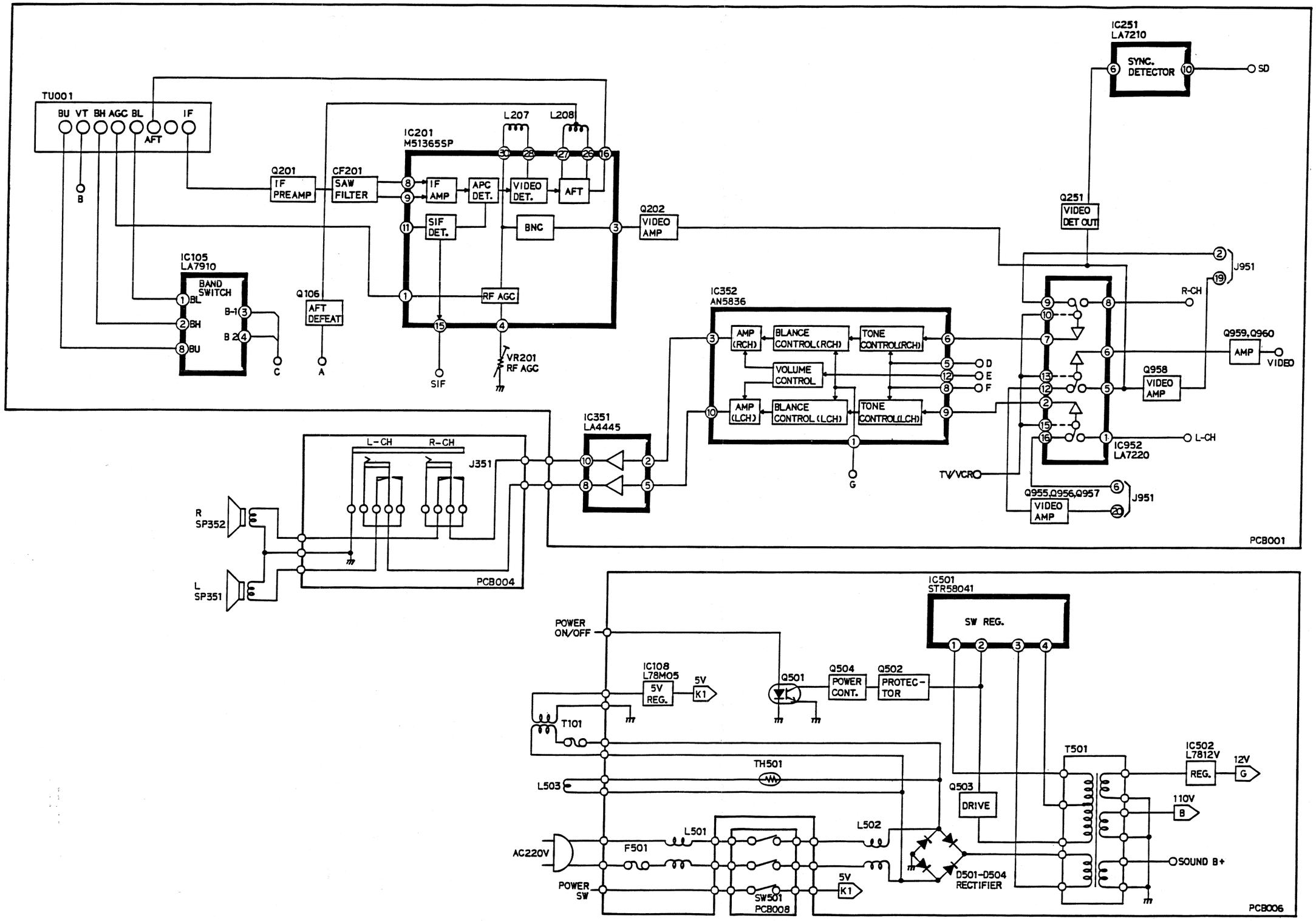
MICON/CHROMA/DEFLECTION BLOCK DIAGRAM



MICON/CHROMA/DEFLECTION BLOCK DIAGRAM

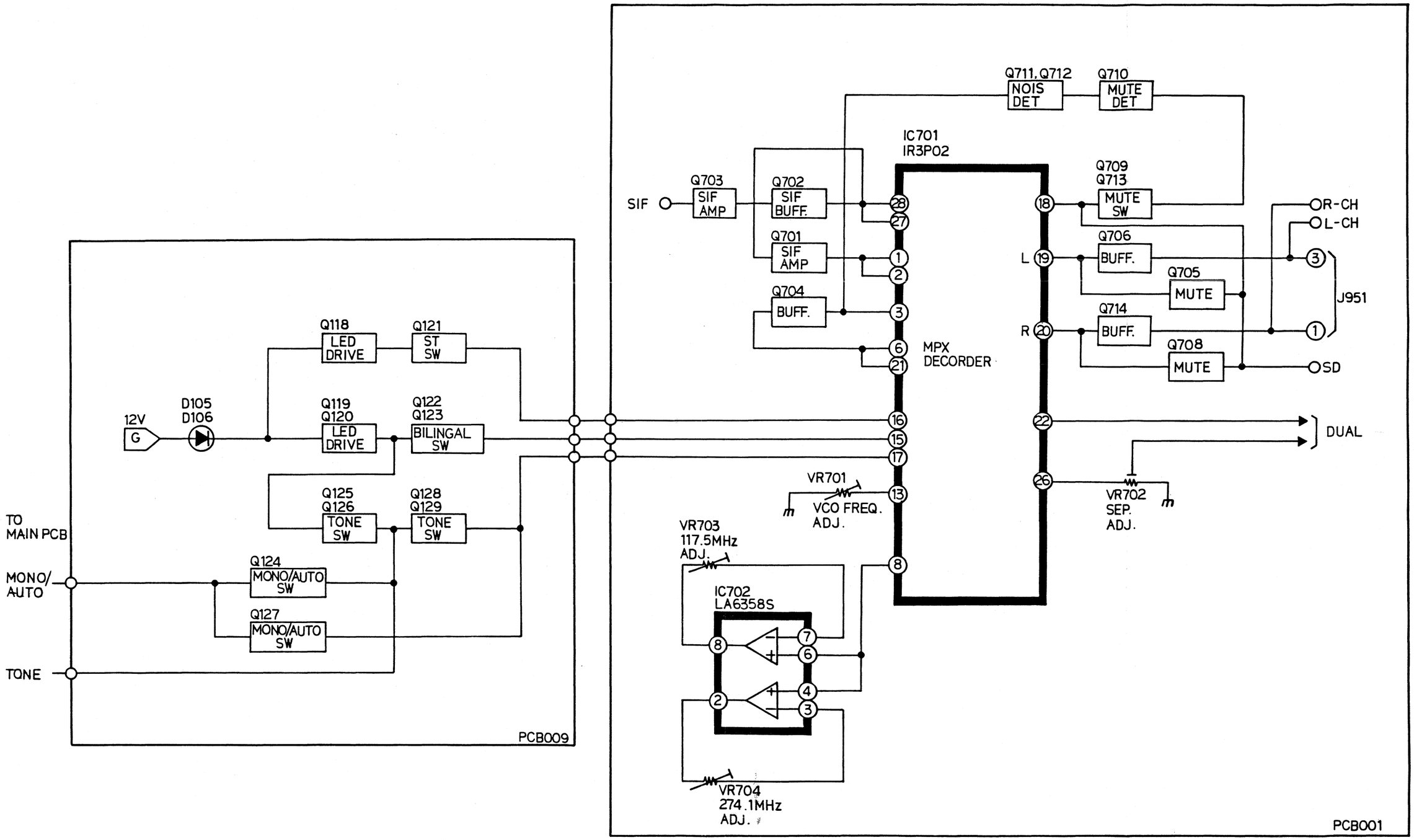
1-8722

IF/POWER/AUDIO BLOCK DIAGRAM



IF/POWER/AUDIO BLOCK DIAGRAM

2-3789

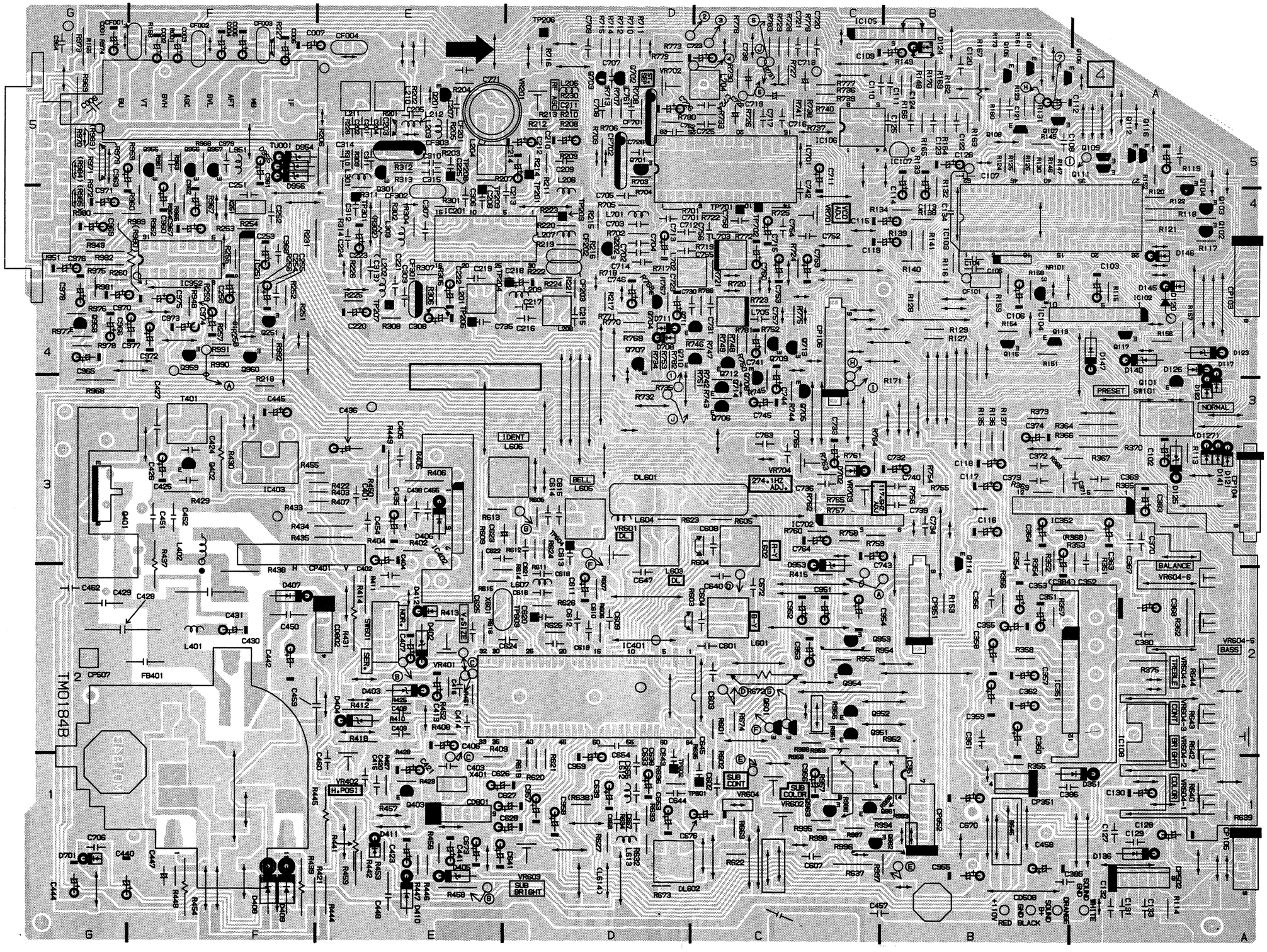


STEREO/LED DRIVE SCHEMATIC DIAGRAM

3-2684

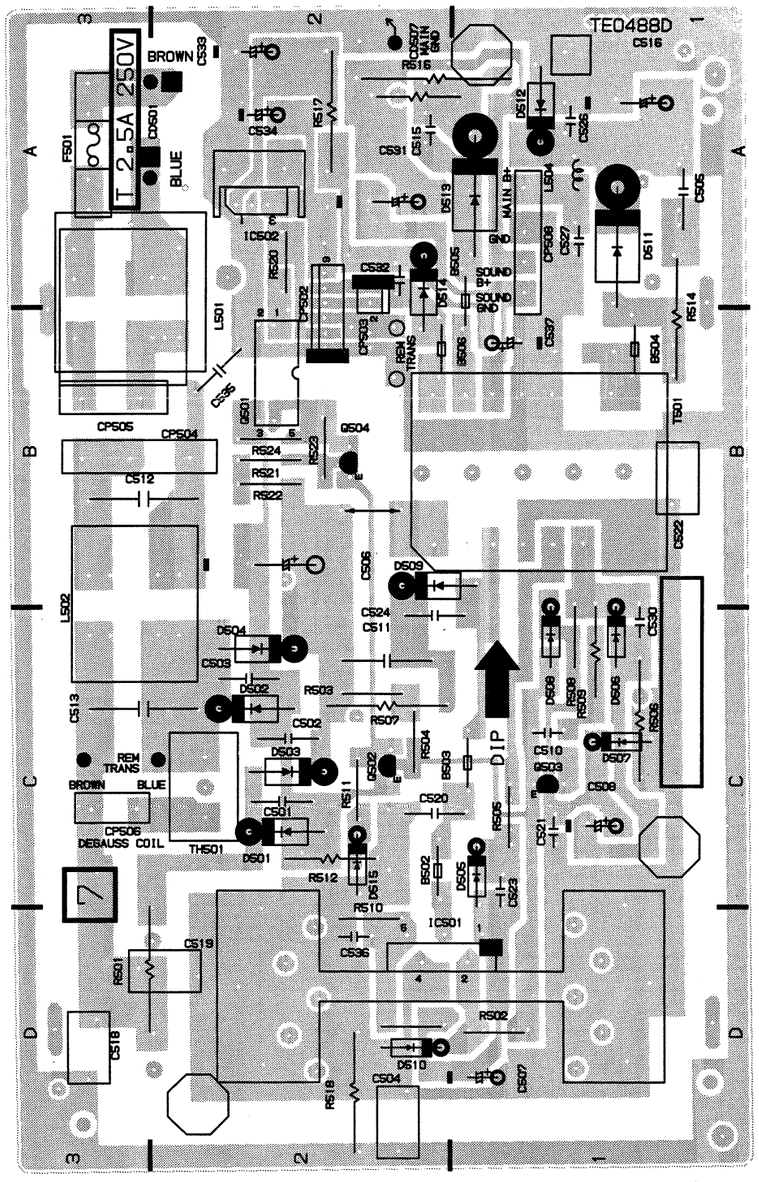
PRINTED CIRCUIT BOARD

MAIN

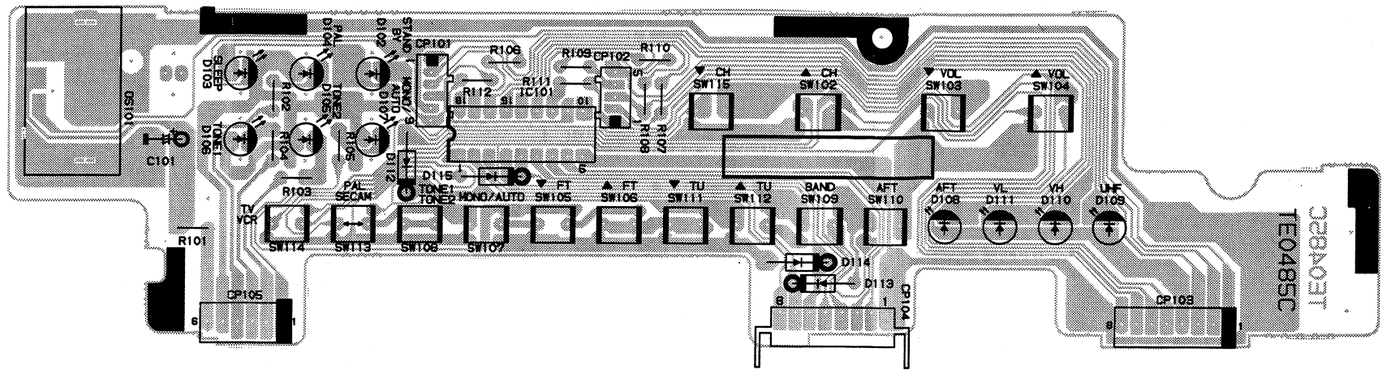


PRINTED CIRCUIT BOARDS

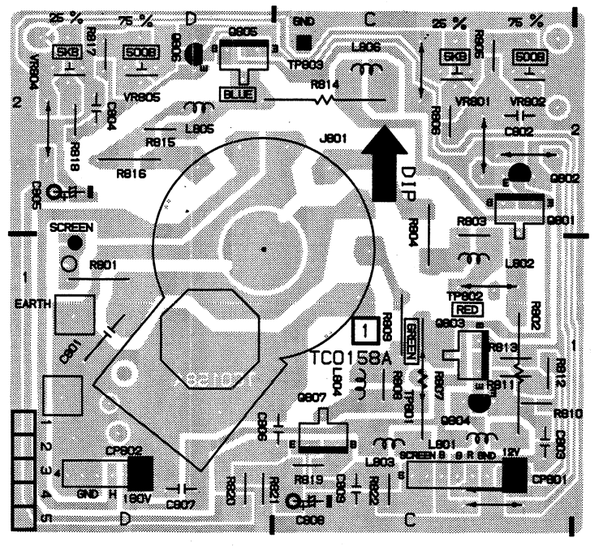
POWER



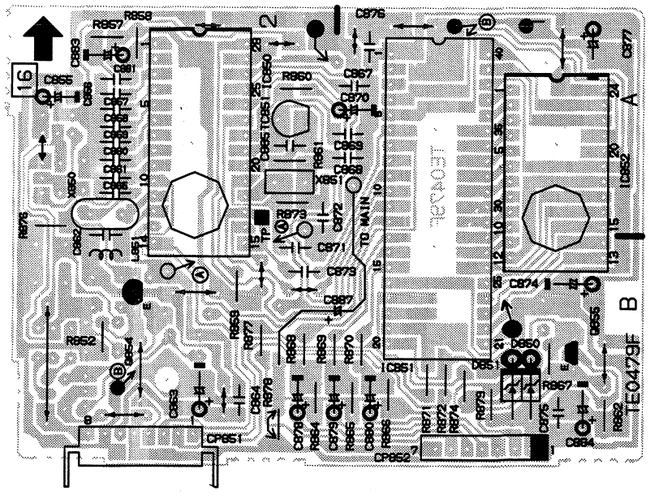
CONTROL



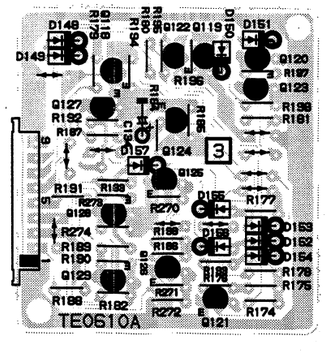
CRT



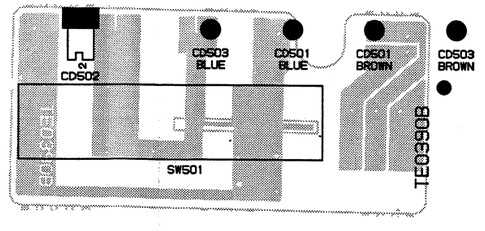
T'TEXT



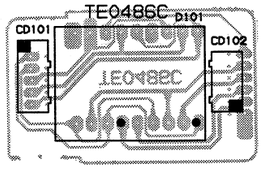
SUB



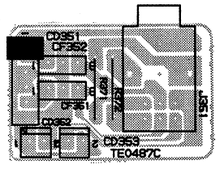
POWER SWITCH



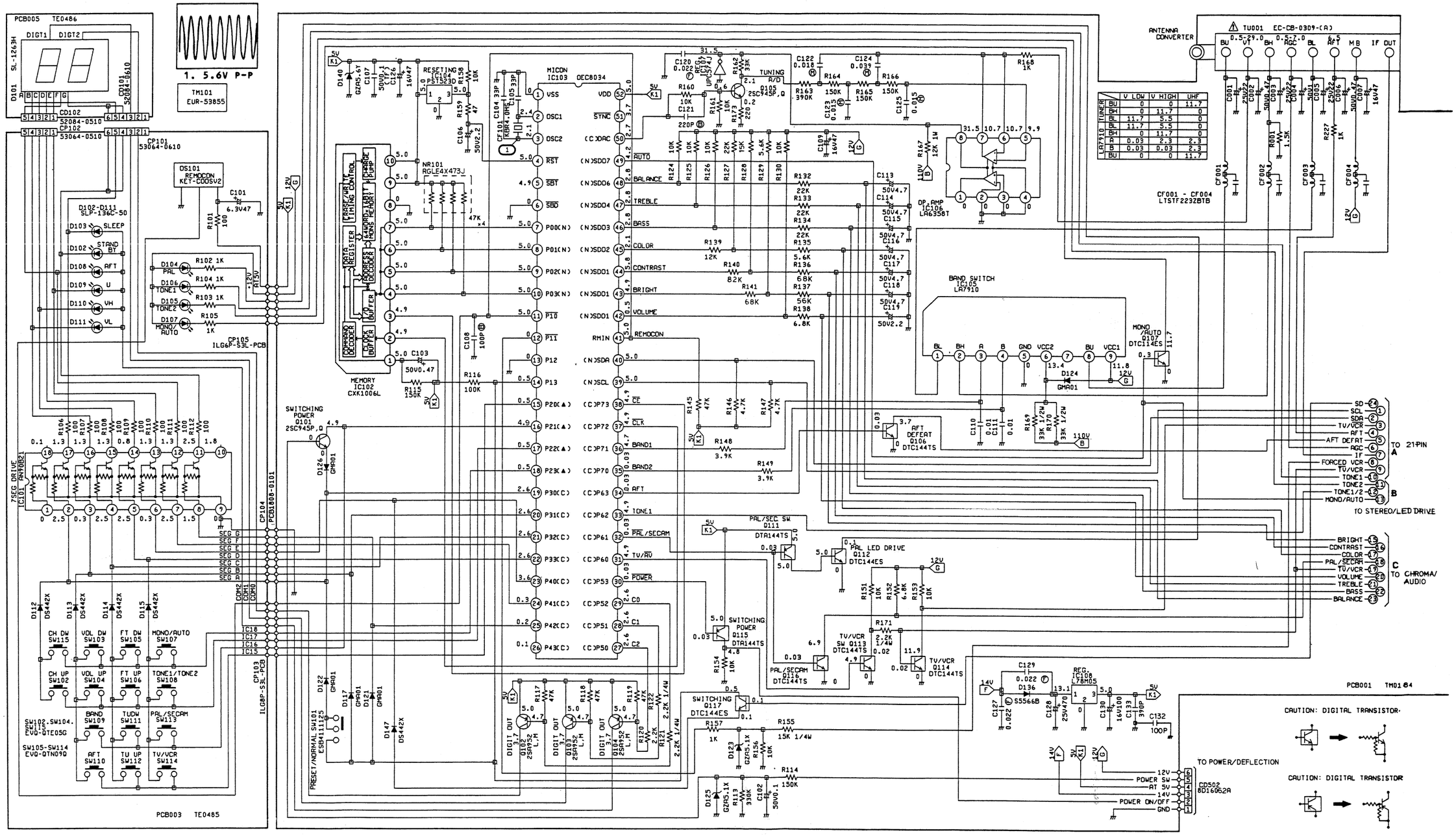
LED



HEADPHONE



MICON/IF SCHEMATIC DIAGRAM



TUNER	V LOW	V HIGH	UHF
BU	0	0	11.7
BH	0	11.7	0
BL	11.7	5.5	0
BF	11.7	5.5	0
BH	0	11.7	0
A	0.03	2.3	2.3
B	0.03	0.03	2.3
BU	0	0	11.7

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY.

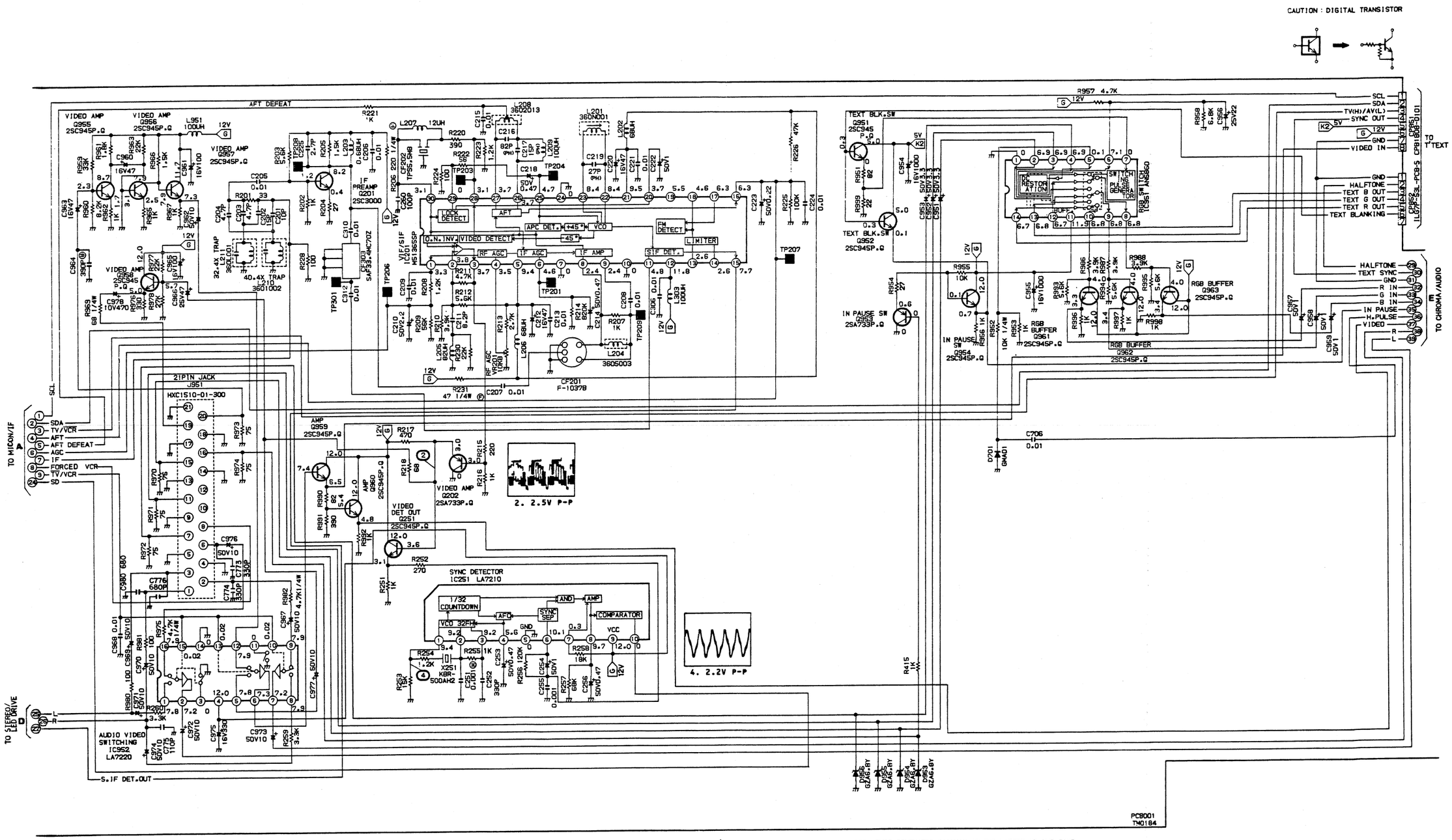
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

MICON/IF SCHEMATIC DIAGRAM

1-10124

21PIN SCHEMATIC DIAGRAM



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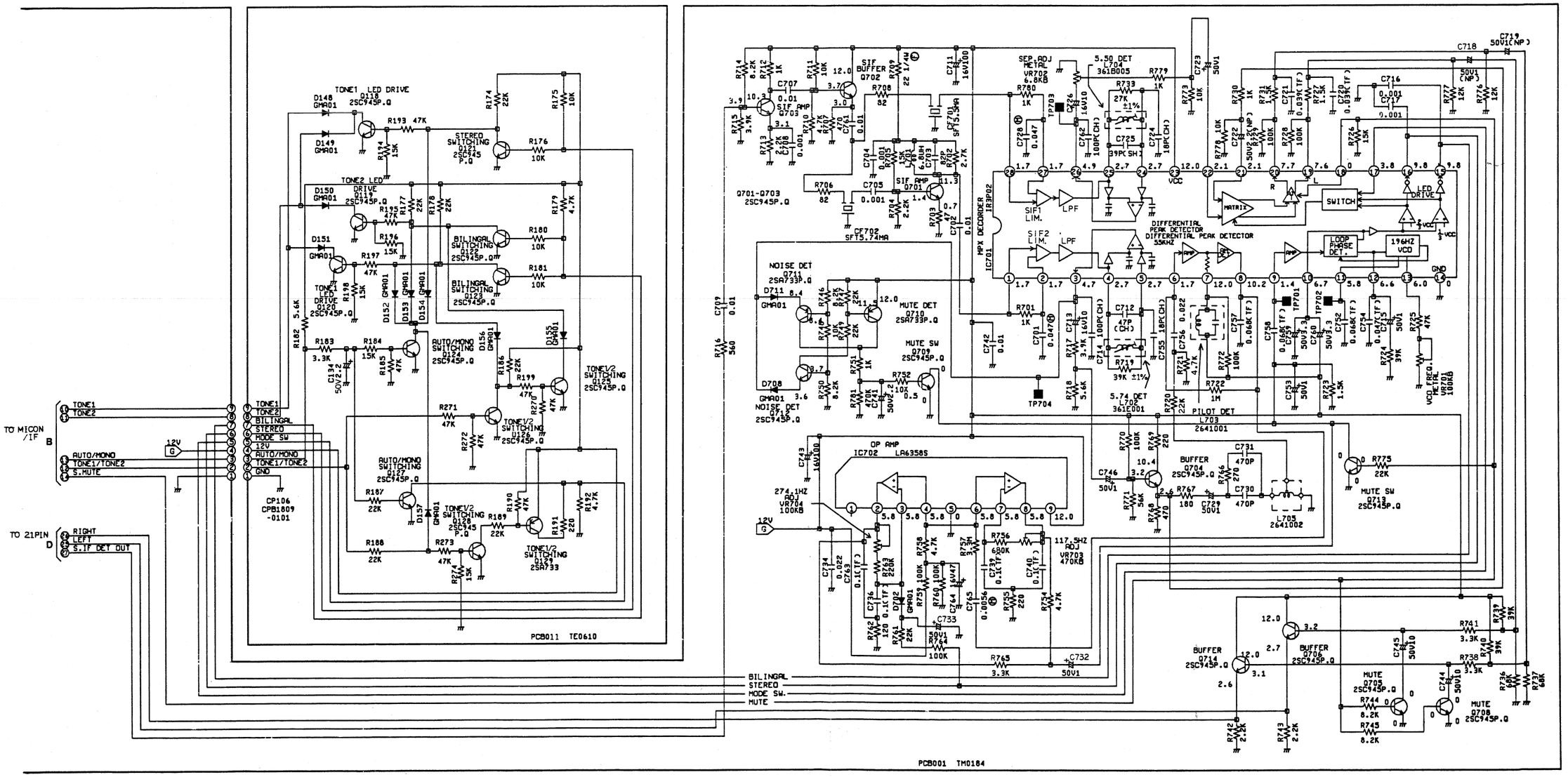
21PIN SCHEMATIC DIAGRAM

1-10570

STEREO/LED DRIVE SCHEMATIC DIAGRAM

VOLTAGE	Q118			Q119			Q120			Q121			Q122			Q123			Q124			Q125			Q126			Q127			Q128			Q129		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
TONE1	0	10.4	0	0.1	10.4	0	0.7	0	0	0.7	0	0	0	0.6	0	0	8.3	0	0.2	8.1	0	0.6	0	0	0	8.3	0	0.2	4.0	0	0	11.9	0	11.9	4.0	0
TONE2	0	10.4	0	0.7	0	0	0.1	10.4	0	0.7	0	0	0	8.3	0	0	0.6	0	0.2	8.1	0	0	8.1	0	0.6	0	0	0.2	11.2	0	0.6	0	0	11.3	11.9	0
MONO	0	10.5	0	0	10.4	0	0	10.4	0	0	0.6	0	0.7	0	0	0.7	0	0	0.7	0	0	0	0	0	0.6	0	0	0.7	0	0	0.1	0.1	0	11.9	0	0
STEREO	0.7	0	0	0	0.7	0	0	0.7	0	0	8.3	0	0.7	0	0	0.7	0	0	0.2	8.1	0	0	0	0	0.6	0	0	0.2	11.2	0	0.6	0	0	11.3	11.9	0



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ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

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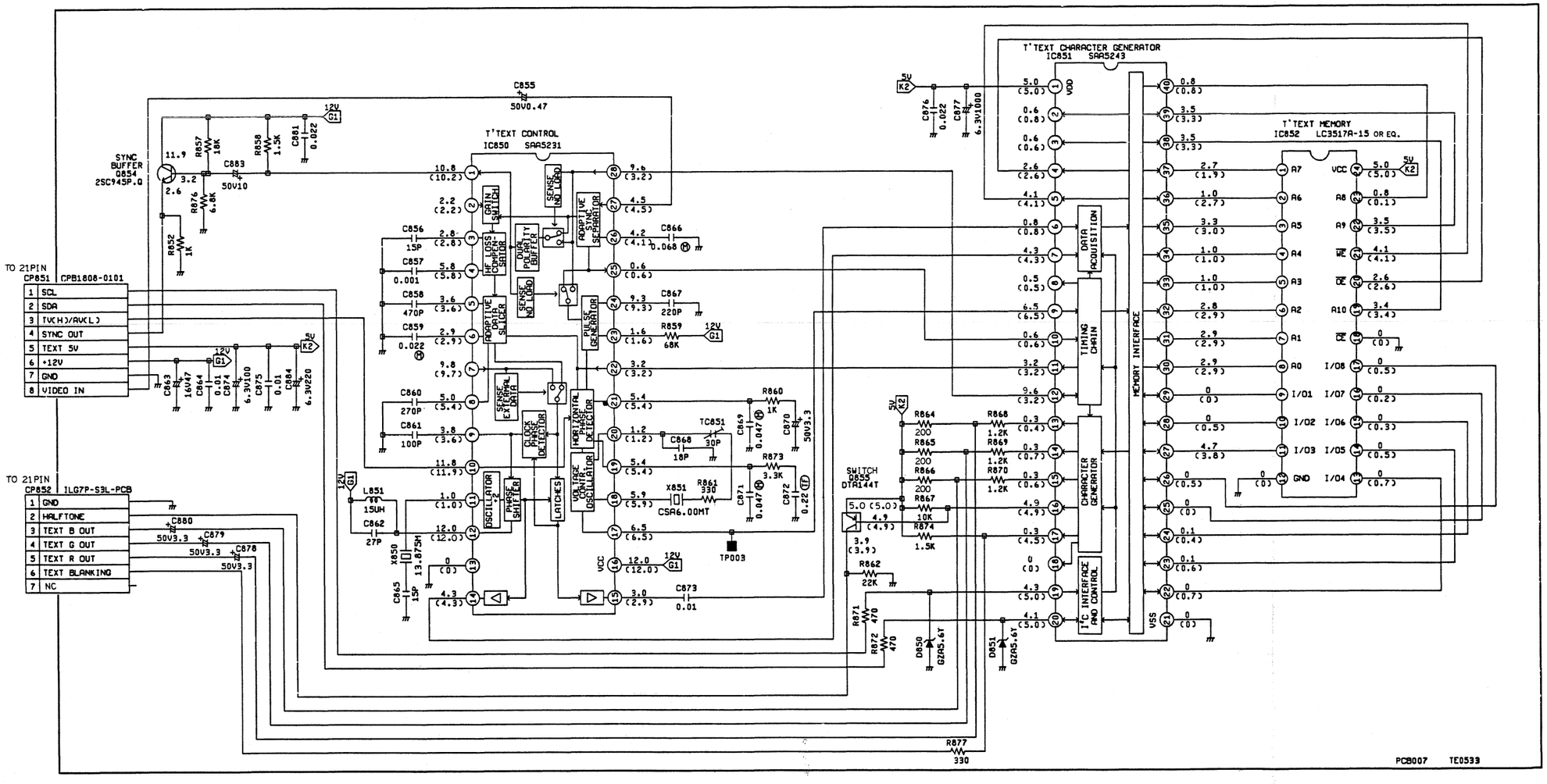
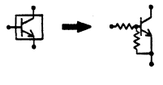
STEREO/LED DRIVE SCHEMATIC DIAGRAM

1-9671

T'TEXT SCHEMATIC DIAGRAM



CAUTION: DIGITAL TRANSISTOR



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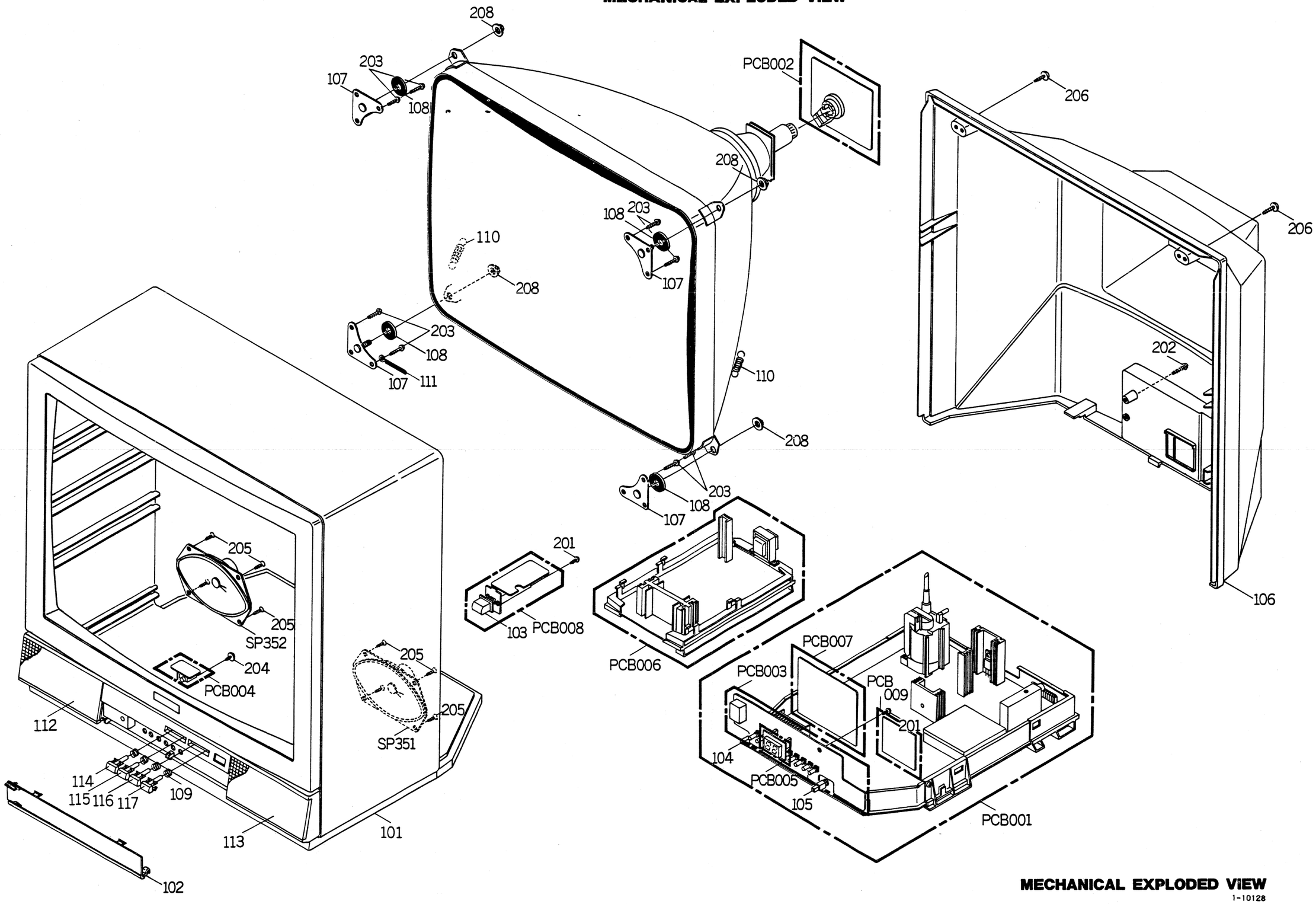
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE FIGURE WITH ( ) IS THE VOLTAGE IN NORMAL TV OPERATION.
THE FIGURE WITHOUT ( ) IS THE VOLTAGE IN TELETEXT OPERETION.

T'TEXT SCHEMATIC DIAGRAM

1-9672



MECHANICAL EXPLODED VIEW

1-10128

MECHANICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION	
101	A37035A720	CABINET,FRONT ASS'Y	
	701UPB0022	CABINET,FRONT	
	7220000938	SHEET,PTB	
	7230002163	PLATE,COLOR	
	7230004131	PLATE,FRONT	
	7232020207	PLATE,BRAND	
	7240000631	SHEET,OPERATION	
	774UPA0001	HOLDER,WIRE	
102	712UPJ0114	DOOR	
103	735TPD0021	BUTTON,POWER	
104	736TPA0003	BUTTON,CAP	
105	735TPA0085	BUTTON,PUSH	
106	A37035A740	CABINET,BACK ASS'Y	
	702UPA0051	CABINET,BACK	
	7222021238	SHEET,RATING	
107	762TSA0037	ANGLE,CRT	
108	800TR00013	SHEET,CRT SUPPORT	
109	742TUA0009	SPRING,BUTTON(B)	
110	741TUA0007	SPRING,EARTH	
111	899P450000	CORD CLAMP NO.P-45	
112	714KSB0009	GRILL,SPEAKER(L)	
113	714KSB0008	GRILL,SPEAKER(R)	
114	735TPA0057	BUTTON,CHANNEL DOWN	
115	735TPA0056	BUTTON,CHANNEL UP	
116	735TPA0059	BUTTON,VOLUME DOWN	
117	735TPA0058	BUTTON,VOLUME UP	
201	8110630A04	TAP TITE(P) BRAZIER	3*10 CH
202	8110630A44	TAP TITE(P) BRAZIER	3*14 CH
203	8110240B04	TAP TITE(P) BIND	4*20 CH
204	8117F30A04	TAPPING(BO) WH12	3*10 CH
205	8117330A04	TAPPING(BO) FLAT	3*10 CH
206	8117540A64	TAPPING(BO) TRUSS	4*16 CH
208	8300560004	SL NUT	M6
---	J3540128B	WARNING SHEET	
---	J3703501A	INSTRUCTION BOOK	
---	J3703503A	SCHEMATIC DIAGRAM	
---	J4511102B	GUARANTEE CARD	
---	7232020330	FILM,DECORATION	
---	791SHA0031	LAMIFILM,BAG	
---	792UHA0030	PACKAGE,TOP	
---	792UHA0031	PACKAGE,BOTTOM	
---	793UCD0371	GIFT BOX	
---	795UHA0004	PAD,STYROFOAM	

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
RESISTORS		
R167	R3B181123J	R,METAL OXIDE 12K OHM 1W
R206	R61584221J	R,FUSE 220 OHM 1/4W
R430	R3B18A122J	R,METAL OXIDE 1.2K OHM 2W
R431	R3B18A122J	R,METAL OXIDE 1.2K OHM 2W
⚠ R437	R61582680J	R,FUSE 68 OHM 1/2W
⚠ R439	R615814R7J	R,FUSE 4.7 OHM 1W
R441	R512CE6R8K	R,CEMENT 6.8 OHM 7W
⚠ R445	R6158A3R3J	R,FUSE 3.3 OHM 2W
R454	R615814R7J	R,FUSE 4.7 OHM 1W
R460	R00106224J	RC 220K OHM 1/6W
R501	R512CE5R6K	R,CEMENT 5.6 OHM 7W
⚠ R502	R63584010J	R,FUSE 1 OHM 1/4W
⚠ R505	R61584470J	R,FUSE 47 OHM 1/4W
⚠ R506	R3B18A820J	R,METAL OXIDE 82 OHM 2W
R507	R3B18A563J	R,METAL OXIDE 56K OHM 2W
R509	R3B181330J	R,METAL OXIDE 33 OHM 1W
⚠ R511	R61584330J	R,FUSE 33 OHM 1/4W
R512	R4B181R47J	R,METAL 0.47 OHM 1W
R514	R3B26A150J	R,METAL OXIDE 15 OHM 2W
R516	R512CD1R2K	R,CEMENT 1.2 OHM 5W
⚠ R517	R614811R5J	R,FUSE 1.5 OHM 1W
⚠ R518	R03101475J	RC 4.7M OHM 1W
R672	R00104222J	RC 2.2K OHM 1/4W
R709	R61584220J	R,FUSE 22 OHM 1/4W
R802	R3B18A103J	R,METAL OXIDE 10K OHM 2W
R807	R3B18A103J	R,METAL OXIDE 10K OHM 2W
R814	R3B18A103J	R,METAL OXIDE 10K OHM 2W
CAPACITORS		
C206	C0FBF0414Z	CC 0.01 UF 50V F
C260	C020SL412K	CC 100 PF 50V SL
C358	E027F2102M	CE 1000 UF 16V
C360	E027F2102M	CE 1000 UF 16V
C368	E027F2102M	CE 1000 UF 16V
C428	P4A2FG103J	CMPP 0.01 UF 2KV
C429	C0D4BN7G2K	CC 180 PF 2KV BN
C431	P4A1F2474J	CMPP 0.47 UF 200V
C436	E027F3222M	CE 2200 UF 25V
C440	E027F4102M	CE 1000 UF 35V
C444	E027F2102M	CE 1000 UF 16V
C448	C0D4BN7B3K	CC 1200 PF 2KV BN
C450	C0D4BN713K	CC 1000 PF 2KV BN
C451	C0D4BN7L2K	CC 330 PF 2KV BN
C458	E0250B100M	CE 10 UF 160V
C459	P3A1F2104J	CPP 0.1 UF 200V
C460	P1F400182K	CP 0.0018UF 50V
C501	C0ABB07H3K	CC 2200 PF 2KV B
C502	C0ABB07H3K	CC 2200 PF 2KV B
C503	C0ABB07H3K	CC 2200 PF 2KV B
⚠ C504	CA1B30KH3M	CC 2200 PF 400V AC
C505	C0D4BN7E3K	CC 1500 PF 2KV BN
C506	E53C0H101M	EC 100 UF 400V
C507	E02QF6100M	CE 10 UF 63V
C508	E02QF5470M	CE 47 UF 50V
C511	P3A1F4473J	CPP 0.047 UF 400V
⚠ C512	P444FB474M	CMPP 0.47 UF 250V
⚠ C513	P444FB474M	CMPP 0.47 UF 250V
C515	C0D4BN713K	CC 1000 PF 2KV BN
C516	E025FB151M	CE 150 UF 160V
⚠ C518	CA1B30KH2M	CC 220 PF 400V AC
C519	C0D4BN7B3K	CC 1200 PF 2KV BN
C520	C0D4BN7B3K	CC 1200 PF 2KV BN
⚠ C522	CA1B30KH3M	CC 2200 PF 400V AC
C524	C0D4BN7Q2K	CC 470 PF 2KV BN
C531	E027F3222M	CE 2200 UF 25V
C533	E027F3102M	CE 1000 UF 25V
⚠ C535	CA1B30KQ2M	CC 470 PF 400V AC
C626	P613F0474J	CMPL 0.47 UF 50V
C627	P613F0474J	CMPL 0.47 UF 50V
C628	P613F0474J	CMPL 0.47 UF 50V
C653	E0F1T5220M	CE 22 UF 50V
C670	E027F2102M	CE 1000 UF 16V
C673	E02702102M	CE 1000 UF 16V
C674	E02702101M	CE 100 UF 16V
C773	C020SL4L2K	CC 330 PF 50V SL
C774	C020SL4L2K	CC 330 PF 50V SL
C775	C0A0SL4A2K	CC 110 PF 50V SL
C776	C020SL4U2K	CC 680 PF 50V SL
C801	C0ABB07H3K	CC 2200 PF 2KV B

REF.NO	PART NO	DESCRIPTION
CAPACITORS (CONT)		
C877	E0A1F0102M	CE 1000 UF 6.3V
C954	E027F2102M	CE 1000 UF 16V
C955	E027F2102M	CE 1000 UF 16V
C980	C020SL4U2K	CC 680 PF 50V SL
SEMICONDUCTORS		
D101	0040322001	LED DISPLAY IC SL-1263H
D102	0021320140	LED SLP-136C-50
D103	0021320140	LED SLP-136C-50
D104	0021320140	LED SLP-136C-50
D105	0021320140	LED SLP-136C-50
D106	0021320140	LED SLP-136C-50
D107	0021320140	LED SLP-136C-50
D108	0021320140	LED SLP-136C-50
D109	0021320140	LED SLP-136C-50
D110	0021320140	LED SLP-136C-50
D111	0021320140	LED SLP-136C-50
D112	D13TDS442X	DIODE,SILICON DS442X-BT
D113	D13TDS442X	DIODE,SILICON DS442X-BT
D114	D13TDS442X	DIODE,SILICON DS442X-BT
D115	D13TDS442X	DIODE,SILICON DS442X-BT
D117	D13TGMA010	DIODE,SILICON GMA-01-BT
D121	D13TGMA010	DIODE,SILICON GMA-01-BT
D122	D13TGMA010	DIODE,SILICON GMA-01-BT
D123	D93T05R10X	DIODE,ZENER GZA5.1 X BT-T
D124	D13TGMA010	DIODE,SILICON GMA-01-BT
D125	D93T05R10X	DIODE,ZENER GZA5.1 X BT-T
D126	D13TGMA010	DIODE,SILICON GMA-01-BT
D136	D25T5566B0	DIODE,RECTIFIER S5566B(TPA3)
D140	D93T05R60Y	DIODE,ZENER GZA5.6 Y BT
D147	D13TDS442X	DIODE,SILICON DS442X-BT
D148	D13TGMA010	DIODE,SILICON GMA-01-BT
D149	D13TGMA010	DIODE,SILICON GMA-01-BT
D150	D13TGMA010	DIODE,SILICON GMA-01-BT
D151	D13TGMA010	DIODE,SILICON GMA-01-BT
D152	D13TGMA010	DIODE,SILICON GMA-01-BT
D153	D13TGMA010	DIODE,SILICON GMA-01-BT
D154	D13TGMA010	DIODE,SILICON GMA-01-BT
D155	D13TGMA010	DIODE,SILICON GMA-01-BT
D156	D13TGMA010	DIODE,SILICON GMA-01-BT
D157	D13TGMA010	DIODE,SILICON GMA-01-BT
D351	D25T5566B0	DIODE,RECTIFIER S5566B(TPA3)
D402	D93T07R50Y	DIODE,ZENER GZA7.5 Y BT
D403	D93T09R10Y	DIODE,ZENER GZA9.1 Y BT
D404	D93T02000Y	DIODE,ZENER GZA20 Y BT
D405	D93T01100Y	DIODE,ZENER GZA11 Y BT
D406	D23TFD05TG	DIODE,RECTIFIER DFD05TG-BT
D407	D23TFD05TG	DIODE,RECTIFIER DFD05TG-BT
D408	D23TFH10TG	DIODE,RECTIFIER DFH10TG-AT1
D409	D23TFH10TG	DIODE,RECTIFIER DFH10TG-AT1
D410	D23TFD05TG	DIODE,RECTIFIER DFD05TG-BT
D411	D13TGMA010	DIODE,SILICON GMA-01-BT
D412	D13TGMA010	DIODE,SILICON GMA-01-BT
⚠ D501	D2BHRM11C0	DIODE,RECTIFIER RM11C
⚠ D502	D2BHRM11C0	DIODE,RECTIFIER RM11C
⚠ D503	D2BHRM11C0	DIODE,RECTIFIER RM11C
⚠ D504	D2BHRM11C0	DIODE,RECTIFIER RM11C
D505	D2BH00EU1Z	DIODE,RECTIFIER EU1Z
D506	D2BH00EU1Z	DIODE,RECTIFIER EU1Z
D507	D2BH00EU1Z	DIODE,RECTIFIER EU1Z
D508	D2B00EU01A	DIODE,SILICON EU01A
D509	D2B00RU1P0	DIODE,RECTIFIER RU1P
D510	D2B00EU01A	DIODE,SILICON EU01A
D511	D2BF0RU4A0	DIODE,SILICON RU4A
D512	D2B000R2M0	DIODE,AVALANCHE R2M
D513	D2BJ00RU4Z	DIODE,RECTIFIER RU4Z
D514	D2BF00RU20	DIODE,SILICON RU-2
D515	D25T5566B0	DIODE,RECTIFIER S5566B(TPA3)
D701	D13TGMA010	DIODE,SILICON GMA-01-BT
D702	D13TGMA010	DIODE,SILICON GMA-01-BT
D708	D13TGMA010	DIODE,SILICON GMA-01-BT
D711	D13TGMA010	DIODE,SILICON GMA-01-BT
D850	D93005R60Y	DIODE,ZENER GZA5.6 Y
D851	D93005R60Y	DIODE,ZENER GZA5.6 Y
D953	D93T06R80Y	DIODE,ZENER GZA6.8 Y BT
D954	D93T06R80Y	DIODE,ZENER GZA6.8 Y BT
D955	D93T06R80Y	DIODE,ZENER GZA6.8 Y BT
D956	D93T06R80Y	DIODE,ZENER GZA6.8 Y BT
IC101	I01D10B210	IC AN90B21
IC102	I30S1006L0	IC CXK1006L
IC103	I51D080340	IC OEC8034
IC104	I0L9TT523D	IC PST523D
IC105	I03S079100	IC LA7910
IC106	I03D06358T	IC LA6358T

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
		SEMICONDUCTORS (CONT)
IC107	102190574J	IC UPC574J-T
IC108	103B98M050	IC L78M05-SA
IC109	152D061220	IC UPD6122G-001
IC201	106DA365SP	IC M51365SP
IC251	103S072100	IC LA7210
IC351	103SP44450	IC LA4445
IC352	101S058360	IC AN5836
IC401	105DE86590	IC TA8659AN
IC402	102SD14880	IC UPC1488H
IC403	103B98M050	IC L78M05-SA
⚠ IC501	12B4980410	IC STR-58041
IC502	103B97812V	IC L7812V-SA
IC701	100DF3P020	IC IR3P02
IC702	103S063580	IC LA6358S
IC850	19KDF52310	IC SAA5231
IC851	14KDF52430	IC SAA5243
IC852	153D03517C	IC LC3517A-15
IC951	101D058600	IC AN5860
IC952	103D072200	IC LA7220
Q101	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q102	TALT009520	TRANSISTOR,SILICON 2SA952(C)-T
Q103	TALT009520	TRANSISTOR,SILICON 2SA952(C)-T
Q104	TALT009520	TRANSISTOR,SILICON 2SA952(C)-T
Q105	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q106	TN7TD03002	COMPOUND TRANSISTOR DTC144TSTP
Q107	TN7TB03001	COMPOUND TRANSISTOR DTC114ESTP
Q111	TP7TD03002	COMPOUND TRANSISTOR DTA144TSTP
Q112	TN7TD03001	COMPOUND TRANSISTOR DTC144ESTP
Q113	TN7TD03002	COMPOUND TRANSISTOR DTC144TSTP
Q114	TN7TD03002	COMPOUND TRANSISTOR DTC144TSTP
Q115	TP7TD03002	COMPOUND TRANSISTOR DTA144TSTP
Q116	TN7TD03002	COMPOUND TRANSISTOR DTC144TSTP
Q117	TN7TD03001	COMPOUND TRANSISTOR DTC144ESTP
Q118	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q119	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q120	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q121	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q122	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q123	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q124	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q125	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q126	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q127	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q128	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q129	TALT007330	TRANSISTOR,SILICON 2SA733(C)-T
Q201	TC3T030000	TR.,SILICON 2SC3000(D,E)-AA
Q202	TALT007330	TRANSISTOR,SILICON 2SA733(C)-T
Q251	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q401	TD3FD18780	TRANSISTOR,SILICON 2SD1878-YD
Q402	TC30026210	TRANSISTOR,SILICON 2SC2621(D,E)
Q403	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
⚠ Q501	000250003Y	PHOTO COUPLER TLP580Y
Q502	TD3T008630	TRANSISTOR,SILICON 2SD863(D,E)-AE
Q503	TD3T008630	TRANSISTOR,SILICON 2SD863(D,E)-AE
Q504	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q601	TN7TD03002	COMPOUND TRANSISTOR DTC144TSTP
Q701	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q702	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q703	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q704	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q705	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q706	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q708	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q709	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q710	TALT007330	TRANSISTOR,SILICON 2SA733(C)-T
Q711	TALT007330	TRANSISTOR,SILICON 2SA733(C)-T
Q712	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q713	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q714	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q801	TC3F042170	TR.,SILICON 2SC4217(D,E)-RAC
Q802	TCLT02001L	TRANSISTOR,SILICON 2SC2001(C)-T L
Q803	TC3F042170	TR.,SILICON 2SC4217(D,E)-RAC
Q804	TCLT02001L	TRANSISTOR,SILICON 2SC2001(C)-T L
Q805	TC3F042170	TR.,SILICON 2SC4217(D,E)-RAC
Q806	TCLT02001L	TRANSISTOR,SILICON 2SC2001(C)-T L
Q854	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q855	TP7TD03002	COMPOUND TRANSISTOR DTA144TSTP
Q951	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q952	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q953	TALT007330	TRANSISTOR,SILICON 2SA733(C)-T
Q954	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q955	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q956	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q957	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q958	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q959	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q960	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q961	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q962	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
Q963	TCLT009450	TRANSISTOR,SILICON 2SC945A(C)-T
		COILS & TRANSFORMERS
L201	03360N001C	COIL,DET 360N001
L202	021Z73680K	COIL 68 UH
L203	021JA6R68M	COIL 0.68 UH
L204	033605003C	COIL,MATCHING 3605003
L205	021JA6820K	COIL 82 UH
L206	021Z73680K	COIL 68 UH
L207	021JA6120K	COIL 12 UH
L208	033602013C	COIL,AFT 3602013
L209	021JA6101K	COIL 100 UH
L210	033601002C	COIL,DET 3601002
L211	03360L001C	COIL,TRAP 360L001
L303	021Z73101K	COIL 100 UH
L401	021679472K	COIL 4.7 MH
L402	0221000012	COIL,LINEARITY 21000012
⚠ L501	0290000001	COIL,LINE FILTER RB-20871
⚠ L502	0290000001	COIL,LINE FILTER RB-20871
⚠ L503	028Q200008	COIL,DEGAUSS 8Q200008
L504	02100B470K	COIL 47 UH
⚠ L505	02AXA509C1	FILTER,LINE ESD-R-16C
L601	03352R011C	COIL,CHROMA 352R011
L602	03352R011C	COIL,CHROMA 352R011
L603	03352R007C	COIL,CHROMA 16035SU
L604	021JA6100K	COIL 10 UH
L605	03302R002C	COIL,CHROMA 302R002
L606	03352R016C	COIL,CHROMA 352R016
L607	021JA6330K	COIL 33 UH
L612	021JA6390K	COIL 39 UH
L613	021JA6270K	COIL 27 UH
L701	021JA66R8K	COIL 6.8 UH
L702	03361E001I	COIL,SOUND IFT 361E001
L703	0326410011	COIL,TRAP 2641001
L704	03361B005I	COIL,SOUND IFT 361B005
L705	0326410021	COIL,TRAP 2641002
L801	021Z73101K	COIL 100 UH
L802	021Z73470K	COIL 47 UH
L803	021Z73101K	COIL 100 UH
L804	021Z73470K	COIL 47 UH
L805	021Z73470K	COIL 47 UH
L806	021Z73101K	COIL 100 UH
L851	021Z73150K	COIL 15 UH
L951	021Z73101K	COIL 100 UH
⚠ T101	0408350147	TRANSFORMER,POWER AC 0835014
T401	03305Y002C	TRANS.,HORIZONTAL DRIVE 305Y002
⚠ T501	0481420205	CONVERTER TRANS. 8142020
		JACKS
J351	0602131001	JACK,RCA 3.5 HSJ0918-01-040
⚠ J801	0662130007	SOCKET,CRT HPS0360-01-020
J951	0632100006	SOCKET,21 PIN HXC1510-01-300
		SWITCHES
SW101	0500101016	SWITCH,PUSH ESB4111125
SW102	0504101T14	SWITCH,TACT EVQ-QTE05G
SW103	0504101T14	SWITCH,TACT EVQ-QTE05G
SW104	0504101T14	SWITCH,TACT EVQ-QTE05G
SW105	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW106	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW107	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW108	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW109	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW110	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW111	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW112	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW113	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW114	0504101T13	SWITCH,TACT EVQ-QTN09Q
SW115	0504101T14	SWITCH,TACT EVQ-QTE05G
⚠ SW501	0530102008	SWITCH,PUSH ESB-76937A
SW601	0510B22001	SWITCH,SLIDE SS-22F16G7
		VARIABLE RESISTORS
VR201	V1163I4BT6	VR,SEMIFIXED EVNDXAA03B14
VR401	V1263Q4B03	VR,SEMIFIXED RH0624CS4J0A
VR402	V1163E28T6	VR,SEMIFIXED EVNDXAA03BC2

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PART NO	DESCRIPTION
		VARIABLE RESISTORS (CONT)
VR601	V116313BT6	VR,SEMIFIXED EVNDXAA03B13
VR602	V1163H4BT6	VR,SEMIFIXED EVNDXAA03BE4
VR603	V1163H4BT6	VR,SEMIFIXED EVNDXAA03BE4
VR701	V126315B03	VR,SEMIFIXED RH0624C15J0E
VR702	V1263U3B03	VR,SEMIFIXED RH0624CW3J09
VR703	V1163Q5BT2	VR,SEMIFIXED EVNDXAA02BQ5
VR704	V116315BT2	VR,SEMIFIXED EVNDXAA02B15
VR801	V175C53B01	VR,SEMIFIXED RVA0911H304-1-502M
VR802	V175C52B01	VR,SEMIFIXED RVA0911H304-1-501M
VR804	V175C53B03	VR,SEMIFIXED RVA0911H304-3-502M
VR805	V175C52B03	VR,SEMIFIXED RVA0911H304-3-501M
		P.C. BOARDS ASS'Y
PCB001	A37035A01AZ	PCB ASS'Y TM0184-Z
PCB002	A37035A11A	PCB ASS'Y TC0158
PCB003	A37035A03A	PCB ASS'Y TE0485
PCB004	A37035A07A	PCB ASS'Y TE0487
PCB005	A37035A20A	PCB ASS'Y TE0486
PCB006	A37035A02A	PCB ASS'Y TE0488
PCB007	A37035A15A	PCB ASS'Y TE0479
PCB008	A37035A34A	PCB ASS'Y TE0390
PCB009	A37035A06A	PCB ASS'Y TE0610
		MISCELLANEOUS
B401	0246451652	CORE,BEADS BF25-4.5*5*1.6
B402	0246451652	CORE,BEADS BF25-4.5*5*1.6
B502	024JT03551	CORE,BEADS FBA04HA450AB-00
B503	024JT03551	CORE,BEADS FBA04HA450AB-00
B504	024JT03551	CORE,BEADS FBA04HA450AB-00
B505	024JT03551	CORE,BEADS FBA04HA450AB-00
B506	024JT03551	CORE,BEADS FBA04HA450AB-00
BT101	141T003004	BATTERY,MANGAN UM-3 1.5V
BT102	141T003004	BATTERY,MANGAN UM-3 1.5V
CD101	069R260259	CONNECTOR PCB SIDE 52084-0610
CD102	069R250259	CONNECTOR PCB SIDE 52084-0510
CD107	068D01202A	CORD,CONNECTOR 8D01202A
CD108	068D01202A	CORD,CONNECTOR 8D01202A
CD351	068D14204A	CORD,CONNECTOR 8D14204A
CD352	068D12198A	CORD,CONNECTOR 8D12198A
CD353	068D12199A	CORD,CONNECTOR 8D12199A
⚠ CD501	120S450020	CORD,AC 120S450020
CD502	068D16062A	CORD,CONNECTOR 8D16062A
CD503	068D12197A	CORD,CONNECTOR 8D12197A
CD504	068D43015A	CORD,CONNECTOR 8D43015A
CD505	068D32043A	CORD,CONNECTOR 8D32043A
CD507	068D01282A	CORD,CONNECTOR 8D01282A
CD508	068D44003A	CORD,EIS CONNECTRR 8D44003A
CD801	122N054005	CORD,JUMPER 2N054005
CD802	122Q044003	CORD,JUMPER 2Q044003
CD803	068D01201A	CORD,CONNECTOR 8D01201A
CD804	068101227A	CORD,CONNECTOR 8101227A
CD805	068101227A	CORD,CONNECTOR 8101227A
CD806	068101228A	CORD,CONNECTOR 8101228A
CD807	068101228A	CORD,CONNECTOR 8101228A
CF001	116F3TH4Z1	FILTER,EMI LTSTF223ZBTB
CF002	116F3TH4Z1	FILTER,EMI LTSTF223ZBTB
CF003	116F3TH4Z1	FILTER,EMI LTSTF223ZBTB
CF004	116F3TH4Z1	FILTER,EMI LTSTF223ZBTB
CF101	10034R0001	CERAMIC OSCILLATOR KBR-4.0M
CF201	1027038R95	FILTER,SAW F1037B
CF202	1012T5R503	FILTER,CERAMIC TRAP TPS5.5MB-TF20
CF303	1022133R42	FILTER,SAW SAF33.4MC70Z
CF351	116F30H4Z1	FILTER,EMI LTSTF223ZB
CF352	116F30H4Z1	FILTER,EMI LTSTF223ZB
CF701	101205R504	FILTER,CERAMIC SFT5.5MA
CF702	101205R743	FILTER,CERAMIC SFT5.74MA
CP101	069R260249	CONNECTOR PCB SIDE 53064-0610
CP102	069R250249	CONNECTOR PCB SIDE 53064-0510
CP103	069H180209	CONNECTOR PCB SIDE ILG8P-S3L-PCB-S
CP104	069Q180179	CONNECTOR PCB SIDE CPB1808-0101
CP105	069H160209	CONNECTOR PCB SIDE ILG6P-S3L-PCB-S
CP106	069Q190179	CONNECTOR PCB SIDE CPB1809-0101
CP351	0694140019	CONNECTOR PCB SIDE 171825-4
CP352	0694120010	CONNECTOR PCB SIDE 2-171825-2
CP353	0694120099	CONNECTOR PCB SIDE 171825-2
CP401	069D340018	CONNECTOR PCB SIDE TS-80P-04-V1
CP502	0694160019	CONNECTOR PCB SIDE 171825-6
CP503	0694120099	CONNECTOR PCB SIDE 171825-2
CP504	069D330018	CONNECTOR PCB SIDE TS-80P-03-V1
CP505	069D320018	CONNECTOR PCB SIDE TS-80P-02-V1
CP506	069D320029	CONNECTOR PCB SIDE TV-50P-02-V1
CP507	069D01001A	CONNECTOR PCB SIDE 003P-2100
CP508	069D440019	CONNECTOR PCB SIDE TV-50P-04-A1
CP803	069D010010	CONNECTOR PCB SIDE 005P-2100

REF.NO	PART NO	DESCRIPTION
		MISCELLANEOUS (CONT)
CP851	069Q180179	CONNECTOR PCB SIDE CPB1808-0101
CP852	069H170209	CONNECTOR PCB SIDE ILG7P-S3L-PCB-S
CV501	12AL10002A	COVER,AC CORD SB-1235B-U09
DL601	104114R43G	DELAY LINE GLASS EFDEN645A31F
DL602	103S000402	DELAY LINE ELT10Z204M
⚠ DY401	027Z092101	DEFRECTION YOKE 0E-95-45
⚠ F501	0808T2R502	FUSE 21802.5 T 2.5A 250V
⚠ FB401	0432200292	TRANSFORMER,FLYBACK 3220029
FH501	06760T0001	HOLDER FUSE PFC5000-0202
FH502	06760T0001	HOLDER FUSE PFC5000-0202
K001	129T000005	WEDGE 7800-4776
K002	129T000005	WEDGE 7800-4776
K003	129T000005	WEDGE 7800-4776
MS501	128B000017	MICA,SHEET STR-50103MICA
NR101	1102447302	R,NETWORK RGLE4X473J
OS101	077M006004	REMOTE RECEIVER KEY-C00SV2
PT501	126C000002	TERMINAL,PIN ST-0015
PT502	126C000002	TERMINAL,PIN ST-0015
SP351	070A555001	SPEAKER CS1208T-3536A
SP352	070A555001	SPEAKER CS1208T-3536A
TC851	0100514001	C,CERAMIC TRIMMER TZ03R300E
TH501	D810M180H0	DEGAUSS ELEMENT ERP-F5B0M180H
TM101	076100Q003	TRANSMITTER EUR-53855
⚠ TU001	0145211006	TUNER,UHF-VHF EC-CB-0309-(A)
⚠ V801	09AZ210403	TUBE,CATHODE RAY G-A51AC812X
X251	1003R50001	CERAMIC OSCILLATOR KBR-500AH2
X401	1002R50301	CERAMIC OSCILLATOR CSB503F2
X601	10054R4301	CRYSTAL NR-18 4.433619MHZ
X850	100613R801	CRYSTAL HC49/U 13.875MHZ
X851	10026R0004	SERALOCK CSA6.00MT

RESISTOR
RC.....CARBON RESISTOR

CAPACITORS
CC.....CERAMIC CAPACITOR
CE.....ALUMI ELECTROLYTIC CAPACITOR
CP.....POLYESTER CAPACITOR
CPP.....POLYPROPYLENE CAPACITOR
CPL.....PLASTIC CAPACITOR
CMP.....METAL POLYESTER CAPACITOR
CMPL.....METAL PLASTIC CAPACITOR
CMPP.....METAL POLYPROPYLENE CAPACITOR
CST.....STYROL CAPACITOR